

# **A Compensated Linearity Voltage-Control-Capacitor Device by Standard CMOS Process**

## **ABSTRACT OF THE DISCLOSURE**

Apparatus and method of providing a CMOS varactor device having improved linearity. At least two differential varactor elements are connected in parallel. Each of the differential elements includes first, second and third doped regions in a well. A first gate controls the first and second regions and a second gate controls the second and third regions. A resistor is formed such that power applied to the bulk region of the two differential elements will differ by the voltage drop across the resistor.